

SOLE INVENTOR

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Colleen M. Burke

**APPLICATION FOR
UNITED STATES LETTERS PATENT**

S P E C I F I C A T I O N

TO ALL WHOM IT MAY CONCERN:

Be it known that I, RICHARD TEMES, a citizen of the United States, residing at 0N356 Ridgeland Avenue, West Chicago, 60185, in the County of Dupage and State of Illinois have invented a new and useful REMOTE CONTROL BOBBER, of which the following is a specification.

REMOTE CONTROL BOBBER

Technical Field

The present invention relates generally to remotely controlled devices and more specifically to a radio controlled fishing bobber.

Background Art

There have been a number of devices developed over the years to assist an angler in pursuit of fish. For instance, U.S. Pat. No. 4,339,888 discloses a remote control fishing device that carries a fishing line to a particular point and drop/retrieve the line. U.S. Pat. No. 6,397,510 shows a fishing bobber with electronics to sense a striking fish. U.S. Pat. No. 6,389,736 describes a fishing bobber with adjustable gravity.

Summary of the Invention

One aspect of the present invention comprises a remote control bobber that includes a housing that is buoyant in water and a motor mounted within the housing having a shaft that extends through the housing. A propeller is mounted on the shaft outside the housing, a receiver is mounted within the housing, the receiver including an antenna and a control circuit to control the motor; and a power supply is connected to the motor and the receiver.

Other aspects and advantages of the present invention will become apparent upon consideration of the following detailed description.

Brief Description of the Drawings

FIG. 1 is a side view of one embodiment of the present invention;

FIG. 2 is a rear view of the embodiment of FIG. 1;

FIG. 3 is a schematic diagram showing an arrangement of the internal components of FIG. 1;

FIG. 4 is a schematic diagram showing the relationship of the transmitter to internal components shown in FIG. 3;

FIG. 5 is a side view of a further embodiment of the present invention;

FIG. 6 is a rear view of the embodiment of FIG. 6;

5 FIG. 7 is a schematic diagram showing an arrangement of the internal components of FIG. 5;

FIG. 8 is a rear view of the exterior of a still further embodiment of the present invention;

10 FIG. 9 is a view of the embodiment of FIG. 8 taken substantially along the line 9-9;

FIG. 10 is schematic diagram showing an arrangement of the internal components of FIG. 8;

FIG. 11 is a side view of a fourth embodiment of the present invention;

FIG. 12 is a rear view of the embodiment of FIG. 11; and

15 FIG. 13 a schematic diagram showing an arrangement of the internal components of FIG. 11.

Detailed Description of the Preferred Embodiments

20 Referring to FIGS. 1 to 4, one embodiment of the remote controlled bobber 20 of the present invention has a housing 22. The housing 22 comprises a first section 24 and a second section 26. The first section 24 and the second section 26 are joined to each other at a central band 28. The first section 24 and the second section 26 can be joined in any conventional manner. For instance, the first section 24 and the second section 26 can be
25 permanently affixed to each other at the central band 28 using conventional adhesives, molded undercuts, or welding techniques. Alternatively, if it will be necessary to have access to the interior of the bobber 20, the first section 24 and the second section 26 can be removably attached to each other at the central band 28. The method of attaching the first section 24 to the second section 26 should form a watertight seal. For instance, an O-ring
30 (not shown) can placed within the central band 28 to form a watertight seal.

Attached to the exterior of either or both of the first section 24 and the second section 26 of the housing 22 are quick release connectors 30. The connectors 30 can be any conventional design and can be attached to the housing 22 by conventional methods. The quick release connectors provide a connection point for the bobber 20 to a fishing line (not shown) and rod (not shown) at one end and the fishing line and hook (not shown) on the other end. A first propeller shaft 32 protrudes through the second section 26 of the housing 22. A second propeller shaft 34 also protrudes through the second section 26 of the housing 22. Both the first and second propeller shafts 32 and 34 have a conventional seal so that no water will enter the housing 22. The first and second propeller shafts 32 and 34 are attached to a first and a second propeller 36 and 38. The first and the second propellers 36 and 38 both propel the bobber through the water and also provide for directional control. A first and a second motor 40 and 42 are connected to the first and second propeller shafts 32 and 34. The first and second motors 40 and 42 can be independently controlled and can be reversible so that one motor can operate in a forward direction and the other motor can operate in reverse. This enables the bobber 20 to be maneuvered into the desired position by the angler. The first and second motors 40 and 42 are connected both to a battery pack 44 that provides power to the first and second motors 40 and 42 by electrical conductors 52.

Control conductors 54 also connect a radio receiver 46 to the first and second motors 40 and 42. The electrical conductors 52 also connect the receiver 46 to the battery pack 44. The control conductors 54 provide signal control to each of the first motor 40 and the second motor 42 independently. A radio transmitter unit 48 can send control signals to an antenna 50 attached to the receiver 46, which in turn provides control to each of the first motor 40 and the second motor 42. The antenna 50 can be completely contained within the housing 22. Any conventional radio controlled transmitter and receiver can be used. Typical receivers of the type used in radio controlled airplanes and cars can be used. These transmitters and receivers operate at a radio frequency of about 27 mhz, although other frequencies can be used. The transmitter 48 typically will have dual

controls 56 and 58 to independently control the first and second motors 40 and 42. Since there may be other anglers using a remote control bobbers near by, provision can be made to encode the radio signals so that a particular transmitter 48 and bobber 20 pair will not interfere with or be interfered by a radio transmitter used by another angler. The transmitter 48 can also include a video screen (not shown) for use with certain embodiments of the present invention.

The housing 22 can be constructed of any suitable watertight material that can be molded into a desired shape, such as plastic. In addition, the bobber 20 is sealed in a watertight manner as described above and also includes a significant amount of free space within the housing 22. This provides buoyancy to the bobber 20 so that it will float. The weight of the components contained within the housing 22 is typically located within the second section 24 so that the bobber will float upright. The housing 22 can be any desired shape such as spherical or egg shaped.

Referring to FIGS. 5 to 7, a second embodiment of a bobber 70 is shown. The bobber 70 has a housing 72 having a first section 74, a second housing 76, and a central band 78 similar to the first section 24, the second section 26, and the central band 28 of the embodiment shown in FIG. 1. The bobber 70 has a single propeller shaft 80 attached to a propeller 82 and a rudder 84 and a rudder shaft 86. The propeller shaft 80 and the propeller 82 are similar to the similar parts shown in FIG. 1. Attached to the housing 72 is a quick release connector 88. While a single connector 88 is shown in FIGS. 5 and 6, multiple connectors 88 can be used if desired.

A radio receiver 90 similar to receiver 46 described above is contained and mounted within the housing 72 in a conventional manner. The receiver 90 is connected to a battery pack 92 using electrical conductors 98. The battery pack is also connected to a first motor 94 that drives the propeller shaft 80 to provide power to the first motor 94. Control conductors 100 are connected from the receiver 90 to the first motor 94 to control the direction and speed of the first motor 94. Also located within the housing 72 is a

second motor 96 that is attached to the rudder shaft 86. The second motor or servo unit 96 is also connected to the battery pack 94 and to the receiver 94 by electrical conductors 98 and control conductors 100 respectively. The receiver 94 can control second motor 96 to provide directional control to the bobber 70. The transmitter 48, as shown in FIG. 4, controls the receiver 94 in the same manner as described above.

FIGS. 8 to 10 show a third embodiment of a bobber 110. The bobber 110 has a housing 112 with a first section 114 and a second section 116. A central band 118 joins the first and second sections 114 and 116. The first section 114 and the central band 118 are similar to the first section 24 and the central band 28 described above. Quick release connectors 120 are connected to both the first and the second section 114 and 116. The second section 116 has a pair of exits 122 of a channel 124 that passes through the interior of the second section 116. A motor 126 is mounted using a mounting bracket 128 within the channel 124. Also mounted on a rudder shaft 130 within the channel 124 is a rudder 132. The motor 126 is attached to a propeller 134 by a propeller shaft 136. The rudder shaft 130 is connected to a rudder control motor 138. This connection is shown as a dotted line in FIG. 10 and can be made by any conventional linkage. Electrical conductors 140 connect a radio receiver 142 to a battery pack 144. The battery pack 144 is also connected to the motor 126 and the rudder control motor 138 by electrical controllers 140. The receiver 142 controls the motor 126 and the rudder control motor 138 by control conductors 146. The transmitter 48, as shown in FIG. 4, controls the receiver 142 in the same manner as described above. The electrical conductors 140 and the control conductors 146 are attached to the mounting bracket 128 to provide power and control to the motor 126.

FIGS. 11 to 13 illustrate a further embodiment of a bobber 160. The bobber 160 has a housing 162 with a first section 164 and a second section 166. A central band 168 joins the first and second sections 164 and 166. The first section 164 and the central band 168 are similar to the first section 24 and the central band 28 described above. Quick release connectors 172 are connected to both the first and the second section 164 and 166.

The second section 166 has a window or transparent area 170 in the end of the second section 166 opposite a first and second propellers 174 and 176. The first and second propellers 174 and 176 are connected to first and second propeller shafts 178 and 180. The first and second propeller shafts are connected to a first and second motor 182 and 184, respectively. The first and second motors 182 and 184 are mounted within the housing 162 in the same manner as the first and second motors 40 and 42 described above. Electrical conductors 186 connect a receiver 188 to a battery pack 190 in the same manner as described above. In a similar manner, the receiver 188 controls the first and second motors 182 and 184 using control conductors 192. A camera 194 is mounted within the housing using conventional mounting methods so that the lens of the camera 194 can look through the window 170. The transmitter 48, as shown in FIG. 4, controls the receiver 188 in the same manner as described above. The camera 194 can transmit images back to the receiver 48. The camera 194 can provide the angler with a view of direction of travel of the bobber 160 if the bobber 160 is out of direct line of sight.

Industrial Applicability

Numerous modifications to the present invention will be apparent to those skilled in the art in view of the foregoing description. Accordingly, this description is to be construed as illustrative only and is presented for the purpose of enabling those skilled in the art to make and use the invention and to teach the best mode of carrying out same. The exclusive rights to all modifications which come within the scope of the appended claims are reserved.